



## PATENT ABSTRACTS OF JAPAN

(11) Publication number: 09083040 A

(43) Date of publication of application: 28.03.97

(51) Int. Cl

**H01L 51/00**  
**H01L 29/786**

(21) Application number: 07234113

(71) Applicant: **SHARP CORP**

(22) Date of filing: 12.09.85

(72) Inventor: **AOMORI SHIGERU**  
**TANAKA ATSUSHI**  
**NAKATANI YOSHIKI**

**(54) THIN FILM TRANSISTOR AND FABRICATION  
 THEREOF**

COPYRIGHT: (C)1997,JPO

## (57) Abstract:

**PROBLEM TO BE SOLVED:** To control the conditions of an organic semiconductor layer, employed as an active layer, in the conducting direction of carrier by arranging the skeletal chain of polymer in the organic semiconductor layer in random direction using a simple method.

**SOLUTION:** A source electrode 4 and a drain electrode 5 are formed on a gate insulation layer 2 which is then subjected to orientation between the source electrode 4 and drain electrode 5 by rubbing the surface in one direction with a dust-free cloth. Consequently, liquid crystal substituents introduced into a polymer composing an organic semiconductor layer are oriented in parallel with the rubbing direction. Since the skeletal chain of polymer is not arranged necessarily in parallel with the source/drain direction of semiconductor element but in a random direction for ensuring good characteristics of element, the characteristics of organic semiconductor layer can be enhanced structurally and a high performance thin film transistor can be obtained.

